



Validating Credit Card Numbers

by DOSHI

Problem

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Editorial

You and Fredrick are good friends. Yesterday, Fredrick received N credit cards from **ABCD Bank**. He wants to verify whether his credit card numbers are valid or not. You happen to be great at regex so he is asking for your help!

A valid credit card from **ABCD Bank** has the following characteristics:

- It must start with a 4, 5 or 6.
- It must contain exactly 16 digits.
- It must only consist of digits (0-9).
- It may have digits in groups of 4, separated by *one* hyphen "-".
- It must **NOT** use any other separator like ' ', '_', etc.
- It must **NOT** have 4 or more consecutive repeated digits.

Examples:

Valid Credit Card Numbers

```
4253625879615786
44244424424442444
5122-2368-7954-3214
```

Invalid Credit Card Numbers

```
42536258796157867      #17 digits in card number → Invalid
4424444424442444      #Consecutive digits are repeating 4 or more times → Invalid
5122-2368-7954 - 3214  #Separators other than '-' are used → Invalid
44244x4424442444      #Contains non digit characters → Invalid
0525362587961578      #Doesn't start with 4, 5 or 6 → Invalid
```

Input Format

The first line of input contains an integer N .
The next N lines contain credit card numbers.

Constraints

$$0 < N < 100$$

Output Format

Print 'Valid' if the credit card number is valid. Otherwise, print 'Invalid'. Do not print the quotes.

Sample Input

```
6
4123456789123456
5123-4567-8912-3456
61234-567-8912-3456
4123356789123456
5133-3367-8912-3456
5123 - 3567 - 8912 - 3456
```

Sample Output

```
Valid
Valid
```

Invalid
Valid
Invalid
Invalid

Explanation

4123456789123456 : **Valid**

5123-4567-8912-3456 : **Valid**

61234-567-8912-3456 : **Invalid**, because the card number is not divided into equal groups of 4.

4123356789123456 : **Valid**

5133-3367-8912-3456 : **Invalid**, consecutive digits 3333 is repeating 4 times.

5123 — 4567 — 8912 — 3456 : **Invalid**, because space ' ' and - are used as separators.

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Submissions: [2895](#)



Max Score: 40




Difficulty: Medium

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Current Buffer (saved locally, editable)  

Python 3   

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☐ Test against custom input

Run Code

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